IN THE CLAIMS

1. (Currently Amended) A system comprising:

a first network device coupled to a first network, the first network coupled to a second network, the first network device comprising <u>device identity information and</u> a source address of the first network device on the second network; and

a directory server coupled to a third network coupled to the second network, the directory server adapted to register the source address <u>and device identity information, said directory server further comprising:</u>

<u>a message processor for parsing a query message from a client to extract a network device source address and a query therefrom, for processing said query to retrieve requested information from a directory table, and for returning said information to said client in reply to said query message;</u>

<u>wherein said message processor determines if said device identity information satisfies said query.</u>

2. (Original) The system of claim 1, wherein the first network device comprises one of a computer, personal digital assistant, pager, cellular telephone, handheld messaging device, facsimile machine, copier, printer, telephone, security camera, household appliance, vending machine, kiosk, or digital camera.

3. (Original) The system of claim 1, wherein the first network device comprises one of an inkjet printer, laser printer, wide format printer, or dot matrix printer.

4. (Original) The system of claim 1, wherein the first network device comprises an Internet protocol telephone.

5. (Original) The system of claim 1, wherein the first network device comprises a

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network connection for coupling to the first network.

6. (Original) The system of claim 1, wherein the first network comprises a local area network.

7. (Original) The system of claim 1, wherein the first network comprises a plurality of interconnected networks.

8. (Original) The system of claim 1, wherein the second network comprises any of a wide area network, global network, public network, or the Internet.

9. (Original) The system of claim 1, wherein the first network comprises a firewall, and the first network device is located within the firewall.

10. (Original) The system of claim 1, wherein the first network comprises a firewall, and the directory server is located outside the firewall.

11-14. (Cancelled).

15. (Currently Amended) A system comprising:

first and second network devices coupled to a first network, the first network coupled to a second network, the first network device comprising first device identity information and a first source address of the first network device on the second network, the second network device comprising second device identity information and a second source address of the second network device on the second network; and

a directory server coupled to a third network coupled to the second network, the directory server adapted to register the first and second source addresses and first and second device identity information, said directory server further comprising:

a message processor for parsing a query message from a client to extract

a network device source address and a query therefrom, for processing said query to retrieve requested information from a directory table, and for returning said information to said client in reply to said query message;
wherein said message processor determines if said device identity information satisfies said query.

16. (Original) The system of claim 15, wherein the first and second network devices each comprise one of a computer, personal digital assistant, pager, cellular telephone, handheld messaging device, facsimile machine, copier, printer, telephone, security camera, household appliance, vending machine, kiosk, or digital camera.

17. (Original) The system of claim 15, wherein the first network device comprises a computer and the second network device comprises one of an inkjet printer, laser printer, wide format printer, or dot matrix printer.

18. (Original) The system of claim 15, wherein the first network device comprises a computer and the second network device comprises an Internet protocol telephone.

19. (Original) The system of claim 15, wherein the first and second network devices each comprise a network connection for coupling to the first network.

20. (Original) The system of claim 15, wherein the first network comprises a local area network.

21. (Original) The system of claim 15, wherein the first network comprises a plurality of interconnected networks.

22. (Original) The system of claim 15, wherein the second network comprises any of a wide area network, global network, public network, or the Internet.

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23. (Original) The system of claim 15, wherein the first network comprises a firewall, and the first and second network devices are located within the firewall.

24. (Original) The system of claim 15, wherein the first network comprises a firewall, and the directory server is located outside the firewall.

25-28. (Cancelled).

29. (Currently Amended) A system comprising:

first and second network devices coupled to a first network, the first network coupled to a second network, the first network device comprising first device identity information and a first source address of the first network device on the second network, the second computer device comprising second device identity information and a second source address of the second network device on the second network; and

a directory server coupled to a third network coupled to the second network, the directory server adapted to register the first and second source addresses and device identity information, and adapted to process requests for source addresses about registered network devices, said directory server further comprising:

a message processor for parsing a query message from a client to extract a network device source address and a query therefrom, for processing said query to retrieve requested information from a directory table, and for returning said information to said client in reply to said query message;

wherein said message processor determines if said device identity information satisfies said query.

30. (Original) The system of claim 29, wherein the first and second network devices each comprise one of a computer, personal digital assistant, pager, cellular telephone, handheld messaging device, facsimile machine, copier, printer, telephone, security

camera, household appliance, vending machine, kiosk, or digital camera.

31. (Original) The system of claim 29, wherein the first network device comprises a computer and the second network device comprises one of an inkjet printer, laser printer, wide format printer, or dot matrix printer.

32. (Original) The system of claim 29, wherein the first network device comprises a computer and the second network device comprises an Internet protocol telephone.

33. (Original) The system of claim 29, wherein the first and second network devices each comprise a network connection for coupling to the first network.

34. (Original) The system of claim 29, wherein the first network comprises a local area network.

35. (Original) The system of claim 29, wherein the first network comprises a plurality of interconnected networks.

36. (Original) The system of claim 29, wherein the second network comprises any of a wide area network, global network, public network, or the Internet.

37. (Original) The system of claim 29, wherein the first network comprises a firewall, and the first and second network devices are located within the firewall.

38. (Original) The system of claim 29, wherein the first network comprises a firewall, and the directory server is located outside the firewall.

39-42. (Cancelled).

43. (New) A directory server apparatus for use in a system that includes multiple first networks interconnected via a second network, where each of the first networks are

linked to one or more network devices each having assigned thereto a source address on the respective first network and device identity information, where the directory server is linked directly or indirectly to the second network and comprises:

a directory table containing a listing of the network devices and prescribed data associated with each listed network device, the prescribed data including the source address and device identity information assigned to the listed network device;

a message processor programmed to perform operations including:

responsive to receiving network devices' assigned source addresses and device identity information, registering said received addresses and information in the directory table;

responsive to receiving a query message via the second network from a requesting network device coupled to one of the first networks, parsing the query message to extract a source address of the requesting network device and a query seeking network devices satisfying stated criteria, accessing the directory table to identify any listed devices satisfying the criteria, and sending the requesting network device an identification of any network devices satisfying the criteria in reply to said query message.

44. (New) The apparatus of claim 43, where if the query seeks network devices linked to the same network as the requesting network device, the message processor requires that network devices resulting from the query must be linked to the same network as the requesting network device.

45. (New) The apparatus of claim 43,

where a router couples a given one of the first networks to the second network, and the router uses multiple addresses on the second network for routing messages from network devices on the given network via the second network;

where the directory table further includes a cross-map associating each of the

multiple addresses on the second network with the first network;

where the message processor is further programmed, if the query seeks network
devices linked to the same network as the requesting network device, to
utilize the cross-map to require that network devices resulting from the
query must be linked to the same network as the requesting network
device.

46. (New) The apparatus of claim 43, where the device identity information listed in the
directory table includes device type.

47. (New) The apparatus of claim 43, where the device identity information listed in the
directory table includes device name.

48. (New) The apparatus of claim 43, where the device identity information listed in the
directory table includes each of the following for a given network device: device type,
device name, location within a building, geographic location, telephone number of the
network device, prescribed access rights to the network device, performance
characteristics of the network device, classes of users or network devices to which the
network device is available or unavailable.

49. (New) The apparatus of claim 43, where the source address includes an internal
address of a network device on one of the first networks.

50. (New) The apparatus of claim 43, where a router couples a given one of the first
networks to the second network, and the router uses multiple addresses on the second
network for routing messages from network devices on the given network via the
second network, and where the source addresses of network devices on the given
network constitute the addresses on the second network.

51. (New) The apparatus of claim 43, further comprising one or more of the network
devices.

52. (New) A computer program product storing a computer executable program for operating a directory server apparatus in a system that includes multiple first networks interconnected via a second network, where each of the first networks are linked to one or more network devices each having assigned thereto a source address on the respective first network and device identity information, where the directory server apparatus is linked directly or indirectly to the second network, the computer executable program comprising operations of:

> providing a directory table containing a listing of the network devices and
>> prescribed data associated with each listed network device, the prescribed data including the source address and device identity information assigned to the listed network device;

> causing a message processor to perform operations including:
>> responsive to receiving network devices' assigned source addresses and device identity information, registering said received addresses and information in the directory table;

>> responsive to receiving a query message via the second network from a requesting network device coupled to one of the first networks, parsing the query message to extract a source address of the requesting network device and a query seeking network devices satisfying stated criteria, accessing the directory table to identify any listed devices satisfying the criteria, and sending the requesting network device an identification of any network devices satisfying the criteria in reply to said query message.